

PATENT

Claim Amendments:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-58 (Canceled).

59. (Original) A method of forming light colored ESD dissipative ceramics comprising the steps of:

- (a) forming a mixture comprising from about 85 to 60 vol.% Y-TZP and from about 15 to 40 vol.% ZnO; and
- (b) densifying the mixture to at least 95% of the theoretical density by a primary heat treatment.

60. (Previously Presented) The method of Claim 59, further comprising employing a secondary heat treatment step to increase the density to greater than 99% of theoretical density.

61. (Original) A method of forming light colored ESD dissipative ceramics comprising the steps of:

- (a) forming a mixture comprising from about 90 to 50 vol.% Y-TZP and from about 10 to 50 vol.% semi-conductive SnO₂; and
- (b) densifying the mixture to at least 95% of the theoretical density by a primary heat treatment.

62. (Previously Presented) The method of Claim 61, further comprising employing a secondary heat treatment step to increase the density to greater than 99% of theoretical density.

Claims 63-77 (Canceled).

78. (Previously Presented) A method of forming and ESD dissipative ceramic component, comprising the steps of:

sintering a composition comprising a base material comprising tetragonal zirconia and a resistivity modifier comprising 5 vol% to about 60 vol% of the base material, the

resistivity modifier selected from conductive and semiconductive materials and mixtures thereof, to form a sintered body; and
hot isostatic pressing the sintered body to form an ESD dissipative ceramic component having a volume resistivity within a range of 10^3 to 10^{11} Ohm-cm.

79. (Currently Amended) A method of forming an ESD dissipative ceramic component, comprising the steps of:

heat treating a ceramic green body to densify the green body and form a densified component, the green body comprising a base material comprising tetragonal zirconia and a resistivity modifier, the resistivity modifier being selected from the group consisting of ZnO, SnO₂, LaMnO₃, BaO·6Fe₂O₃; and
adjusting a ~~resistivity~~ resistivity of the densified component by annealing the densified component.

80. (Canceled)

81. (Previously Presented) The method of claim 79, wherein the step of adjusting the resistivity is carried out by annealing to change an equilibrium density of charge carriers.

82. (Previously Presented) The method of claim 79, wherein heat treating is carried out by sintering.

83. (Previously Presented) The method of claim 82, wherein the sintering step is carried out by pressureless sintering.

84. (Previously Presented) The method of claim 79, wherein heat treating is carried out by sintering and hot pressing.

85. (Previously Presented) The method of claim 84, wherein hot pressing comprises hot isostatic pressing.

86. (Previously Presented) The method of claim 79, wherein heat treating is carried out at a first temperature, and annealing is carried out at a second temperature, the second temperature being less than 90% of the first temperature.

87. (Previously Presented) The method of claim 86, wherein the second temperature is within a range of about 560 °C to 890 °C.

88. (Previously Presented) The method of claim 79, wherein the resistivity is adjusted by at least 25%.